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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/603,763	06/26/2003	Hong Chul Kim	8733.856.00-US	4492
30827	7590	08/22/2005	EXAMINER	
MCKENNA LONG & ALDRIDGE LLP 1900 K STREET, NW WASHINGTON, DC 20006			SHANKAR, VIJAY	
			ART UNIT	PAPER NUMBER
			2673	

DATE MAILED: 08/22/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/603,763

Applicant(s)

KIM, HONG CHUL

Examiner

VIJAY SHANKAR

Art Unit

2673

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 26 June 2003.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-15 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-15 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

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DETAILED ACTION

Priority

1. Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

Claim Objections

2. Claims 1 and 10 are objected to because of the following informalities:

- 1) Claims 1 and 10; line 5; " gate an data " should be recited as " gate and data " . Appropriate correction is required.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

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4. Claims 1-15 are rejected under 35 U.S.C. 102(e) as being anticipated by Kondoh et al (6,567,065).

Regarding Claims 1 and 10, Kondoh et al teaches a ferroelectric liquid crystal display (Fig.1-2; Col.4, lines 28-65), comprising: a liquid crystal display (LCD) panel including a plurality of gate lines, a plurality of data lines crossing the plurality of gate lines, and ferroelectric liquid crystal (FLC) material, wherein a plurality of liquid crystal cells arranged in a matrix pattern are defined by the crossings of the gate and data lines (Figs.3,9; Column 5, line 1- Col.6, line 45; Col.7, line 9 – 56); a gate driving circuit for applying a scan pulse at least twice to each one of the plurality of gate lines during one frame period of the LCD panel (Figs.3,9-10; Col.7, line 31- Col.8, line 65); and a data driving circuit for applying data voltages to the data lines of the LCD panel in synchrony with the scan pulse (Fig.9-10; Col.7, line 58- Col.9, line 16).

Regarding Claims 2 and 11, Kondoh et al teaches the ferroelectric liquid crystal display wherein the liquid crystal cell is a Half V-Switching Mode LFC cell (see fig.10).

Regarding Claim 3, Kondoh et al teaches the ferroelectric liquid crystal display further comprising a timing controller (25 in fig.9) for controlling the data driving circuit and the gate driving circuit (Fig.9; Col.7, lines 40- 57).

Regarding Claim 4, Kondoh et al teaches the ferroelectric liquid crystal display wherein the timing controller generates a multiple gate start pulse for causing the gate driving circuit to sequentially generate the scan pulse and for supplying the multiple gate start pulse to the gate driving circuit (Figs.9-10; Col.8, lines 1-65) .

Regarding Claim 5, Kondoh et al teaches the ferroelectric liquid crystal display wherein the multiple gate start pulse is generated at least twice during the one frame period of the LCD panel. (Fig.10; Col.7, line 59- Col.8, line 65)

Regarding Claims 6 and 13, Kondoh et al teaches the ferroelectric liquid crystal display wherein the data driving circuit applies identical data voltages to the plurality of data lines at least twice during the one frame period of the LCD panel. (Fig.10; Col.7, line 56 - Col.9, line 15).

Regarding Claims 7 and 14, Kondoh et al teaches the ferroelectric liquid crystal display wherein the data driving circuit maintains a polarity of the data voltage applied to the data lines during the one frame period of the LCD panel.
(Figs.1,10; Col.4, lines 28-65; Col.7, line 60- Col.8, line 65).

Regarding Claims 8 and 15, Kondoh et al teaches the ferroelectric liquid crystal display wherein the data driving circuit inverts a polarity of the data voltage applied to the data lines at least once during the one frame period of the LCD panel. (Figs.1,10; Col.4, lines 28-65; Col.7, line 60- Col.8, line 65).

Regarding Claim 9, Kondoh et al teaches the ferroelectric liquid crystal display wherein the timing controller includes a memory device for storing data such that substantially identical data voltages are suppliable to the LCD panel at least twice during the one frame period of the LCD panel. (Figs.3,9-10; Col.7, line 31- Col.8, line 65).

Regarding Claim 12, Kondoh et al teaches the driving method of the ferroelectric liquid crystal display further comprising generating a multiple gate start pulse for controlling the scan pulse, wherein the multiple gate start pulse is generated at least twice during the one frame period of the LCD panel. (Fig.10; Col.7, line 56 - Col.9, line 15).

5. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Ogino et al, Tanaka et al, Kim, Okada et al, Koden et al, Mcknight teach the ferroelectric liquid crystal display .

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to VIJAY SHANKAR whose telephone number is (571) 272-7682. The examiner can normally be reached on M-F 7:00 am - 4:30 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, BIPIN SHALWALA can be reached on (571) 272-7681. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

A handwritten signature in black ink, appearing to read 'Vijay Shankar', with a stylized, flowing script.

VIJAY SHANKAR
Primary Examiner
Art Unit 2673

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